Status Report 4 – March 28th, 2019

Dear Kristian,

This report is to provide an update on the progress of the EZ Tracker project to date. Its main focus is on the integration of the formerly independent hardware and software components into one cohesive unit.

Overall Progress and Troubleshooting

As mentioned in the previous report, the PCB had been fully designed. Unfortunately, it did not work as we had intended. Our PCB would detect the sensors correctly, but when running our program it would not work correctly and errors were thrown we had not seen before. We had determined it to be faulty wiring as the project would succeed on a breadboard. We reduced the number of Pi GPIO pins (as indicated between v1 and v2) we were connected to and branched our vias to accept inputs from the 3 sensors at once, essentially simplifying the overall design.

In addition, we had our case designed by Delroy as per our group discussions. We had proposed a compartment below to house the rechargeable battery, and a port to charge and power our device. After receiving the completed product, we realized we had measured incorrectly for the battery, charging, and power source compartment. We have re-measured and Delroy will be in the process of re-designing in Corel Draw over the weekend, to be ready for next weeks milestone.

Lastly, Jonas is in the process of working with the Raspberry Pi's WiFi direct system. This will allow the user to access an apache website hosted on the device, from their phone. This makes it easier for logging in and running the program from the mobile device. Jonas is still in the process of configuring this system and managed to get it working. Unfortunately, the WiFi direct had spontaneously stopped co-operating and is trying to figure out reasons and solutions to correct it.

Financial Status and Remaining Work

There has been no change in our financial status and our budget remains the same. Given the amount of remaining work left, we will most likely not be able to make the switch to a Pi Zero. We realize that further improvements can be made as revisions occur just like in any other product. We have opted to have a well working device the first time around rather than something that is smaller. By the end of next week we hope to have a functional standalone unit, the only thing left after that would be tweaking of the sensors for accuracy, and WiFi direct configuration. We also plan on completing all of the requirements of our Android application as well, which includes caloric calculations and launching the webpage to log into the Pi.

Sincerely,

EZ Tracker Team